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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,829	12/22/2000	Arthur John Low	47-11 US	8806
21005	7590	11/17/2004		
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			EXAMINER PATEL, NIKETA I	
			ART UNIT 2182	PAPER NUMBER

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,829

Applicant(s)

LOW ET AL.

Examiner

Niketa I. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 28-33, 35-43 and 45-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Benayoun et al. U.S. Patent Number: 6,704,866 (hereinafter "*Benayoun*".)

3. **Referring to claim 28**, *Benayoun* teaches a data encryption system [see abstract] comprising: a control process which modifies a received packet to include control data which identifies processes to be performed on the packet [see column 4 - lines 28-63]; a plurality of processors which perform the processes identified by the control data, including an encryption process [see figure 1 - elements DTE1, NODE1 to

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NODE6, DTE2; column 4 - lines 28-63]; an interconnection which responds to control data in the packet to forward the packet with control data from processor to processor [see column 4 - lines 29-63; column 3 - lines 1-35]; and an output from which the processed packet is forwarded without the control data [see column 4 - lines 28-40; figure 1 - elements NODE6, DTE2.]

4. **Referring to claims 29 and 39**, *Benayoun* teaches that the interconnection comprises a packet buffer including buffer control, which determined a next processor of the plurality of processor to process the data packet [see column 4 - lines 29-67; column 5 - lines 1-20; column 6 - lines 15-32; column 3 - lines 1-35.]

5. **Referring to claims 30 and 40**, *Benayoun* teaches that the buffer controller includes a resource manager which maintains information n resource processor availability [see column 8 - lines 21-23.]

6. **Referring to claims 31 and 41**, *Benayoun* teaches that the control data includes code to be processed in at least one of the processors [see column 4 - lines 29-63; column 3 - lines 1-35.]

7. **Referring to claims 32 and 42**, *Benayoun* teaches that the control data further included an encryption or authentication

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key [see column 4 - lines 29-63; column 7 - lines 47-67; column 8 - lines 1-15.]

8. **Referring to claims 33 and 43**, *Benayoun* teaches that individual processors add result data to the control data [see column 4 - lines 29-63; column 7 - lines 47-67; column 8 - lines 1-15.]

9. **Referring to claims 35 and 45**, *Benayoun* teaches that respective processors perform IP header manipulation and encryption [see column 4 - lines 29-63; column 7 - lines 47-67; column 8 - lines 1-19.]

10. **Referring to claims 36 and 46**, *Benayoun* teaches that a processor performs authentication processing [see column 4 - lines 29-63; column 7 - lines 47-67; column 8 - lines 1-19.]

11. **Referring to claim 37**, *Benayoun* teaches a method of encrypting or decrypting data packets comprising: modifying a received packet to include control data which identifies processes to be performed on the packet [see column 4 - lines 29-63; column 3 - lines 1-35]; and in successive processors, performing the processes identified by the control data, including an encryption or decryption process [see figure 1 - elements DTE1, NODE1 to NODE6, DTE2; column 4 - lines 28-63.]

12. **Referring to claim 38**, *Benayoun* teaches that the packet is forwarded from processor to processor through an interconnection

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which responds to control data in the packets [see column 4 - lines 29-63; column 7 - lines 47-67; column 8 - lines 1-19.]

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 34 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benayoun et al. U.S. Patent Number: 6,704,866 (hereinafter "*Benayoun*".)

15. **Referring to claims 34 and 44**, *Benayoun* teaches that the processors perform IP protocol processing [see column 4 - lines 28-63], however does not teach that the processors perform IPSEC protocol processing.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to get the advantage of ensuring secure packet exchanges at the IP layer by using IPSEC protocol.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include an IPSEC protocol to get this advantage.

Response to Arguments

16. Applicant's arguments filed 08/18/2004 have been fully considered but they are not persuasive. The applicant argues that the *Benayoun* reference does not teach (a) control process which modifies a received packet to include control data which identifies process to be performed on the packet (b) a plurality of processor which perform the processes identified by the control data, including an encryption process (c) an interconnection which responds to control data in the packet to forward the packet with control data from processor to processor (d) an output from which the processed packet is forwarded without the control data.

The Examiner respectfully disagrees with these arguments, *Benayoun* reference teaches the claimed invention.

As per the first argument, *Benayoun* teaches "***The process consists in adding to each data frame a Data Manipulation Layer (DML) defining the parameters necessary for managing the manipulation (compression and/or encryption) of each field of the data frame located after the DML and adding to each data***

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frame a Control message for transporting a control protocol defining new parameters..." (See column 3, lines 15-23 and similar language can be found at various places though out the reference including: abstract, lines 10-18 and column 4, lines 28-40) i.e., control process which modifies a received packet to include control data which identifies process to be performed on the packet.

As per the second argument, Benayoun teaches **"The invention consists in adding a protocol layer in front of the existing protocols if supported by the network nodes or between the existing protocols in order to pass through the nodes that are not aware of the added protocol in order to coexist with the already installed protocols. Thus, it is possible to add the new protocol layer between the ATM protocol and the IP protocol or between the IP protocol and the TCP protocol or other upper layers. In order to inform the upper layers of the presence of this new protocol...The purpose of the added protocol is to define each field of the frame or cell, data as well as header, as being manipulated (compressed or encrypted or both). Thus, several compression and encryption protocols may be defined filed by field."** (See column 4, lines 41-56) i.e., a plurality of processor (nodes), which perform the processes identified by the control data, including an encryption process.

As per the third argument, Benayoun teaches "**Another object of the invention is to a new protocol able to split the various fields of a data frame by data and headers and a capability for each node to be able to manipulate, that is to compress (or decompress) and/or to encrypt (or decrypt) selected fields of the data frame. Accordingly, the invention relates to a process for controlling frames transporting data from a transmitting Terminal to at least a receiving Terminal through a plurality of consecutive nodes...**" (See column 3, lines 1-10.) i.e., an interconnection which responds to control data in the packet to forward the packet with control data from processor to processor.

As per the fourth argument, Benayoun teaches "**Reciprocally, the into compressed and/or encrypted data is transformed into clear data between NODE 6 and the receiving Terminal DTE 2.**" (See column 4, lines 37-39) i.e., an output from which the processed packet is forwarded without the control data.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following

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documents have been made record of to further show the state of the art as it pertains to data encryption and decryption:

Howitt U.S. Patent Number: 5,742,930

Yagil et al. U.S. Patent Number: 6,732,315

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

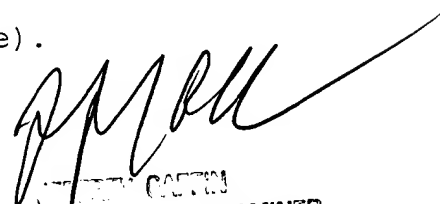
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (571) 272 4156. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571) 272 4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
11/03/2004


JEFFREY A. GAFFIN
PATENT EXAMINER
CENTER 2100